

13. A sensor for detecting pitch in a towed array comprising:

a plurality of optical fibers supported in a structure;

a movable mass supported within the structure by said  
plurality of optical fibers; and

means for detecting changes in tension in each of said  
optical fibers due to movement of said movable mass.

14. A sensor according to claim 13 wherein said optical fibers  
are the only deformable structures in said sensor.